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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,997	09/30/2003	Janakiraman Vaidyanathan	EH-10885 (03-368)	5257

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EXAMINER

EVANS, GEOFFREY S

ART UNIT PAPER NUMBER

1725

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/674,997

Applicant(s)

VAIDYANATHAN ET AL. 

Examiner

Geoffrey S Evans

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,6,7,10,12, and 14-17 is/are rejected.
- 7) ☒ Claim(s) 3,5,8,9,11 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. The following action is in response to the amendment of 1 October 2004.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1,6,7,10, and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by McGraw in U.S. Patent No. 6,723,951 B1. McGraw discloses determining the general (nominal) location of the hole by the camera, and then relatively moving the camera with respect to the workpiece (see column 7, lines 4 to 38) to determine then the vision processor (element 28) computes the centerline of the hole (see column 7, lines 40-47). Finally the hole is drilled to remove any obstructions (see column 7, lines 53-58). Regarding claims 6 and 7, McGraw does this for one or more cooling holes in a turbine blade (see column 1, lines 6-26).
4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over McGraw in view of Mueller et al. in U.S. Patent No. 6,615,099. Mueller et al. teaches calibrating

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the optics to compensate for the optical offset of the laser source. It would have been obvious to adapt McGraw in view of Muller et al. to provide this to properly redrill the hole at the appropriate location.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over McGraw in view of Mueller et al. as applied to claim 2 above, and further in view of Zhang in U.S. Patent Publication No. 2003/00222984-A1. Zhang teaches calibrating a camera (e.g. see paragraph 2). It would have been obvious to adapt McGraw in view of Muller et al. and Zhang to provide this to accurately extract three-dimensional information.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Snow et al. in U.S. Patent Application Publication No. 2003/0142862 A1 in view of Wu in U.S. Patent No. 5,577,130. Snow et al. in the embodiment shown in figures 2A and 2B meets all of the limitations of claim 14 except a fixture movable between a first position and a second position. Wu teaches a fixture (e.g. see in figure 2 elements 14 and 16) that can move a camera a displacement distance to take images of a workpiece. It would have been obvious to adapt Snow et al. in view of Wu to provide this so that the distances between the positions is fixed and the user does not have to continually support the camera.

8. Claims 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGraw in U.S. Patent No. 6,723,951 B1 in view of Albrecht et al. in U.S. Patent No. 6,683,977. McGraw meets all of the limitations of claims 14-17 except a fixture that is movable for supporting the camera in a plurality of positions. Albrecht et al. in U.S. Patent No. 6,683,977 discloses a fixture for supporting a camera in a plurality of

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positions. It would have been obvious to adapt McGraw in view of Albrecht et al. to provide this so that the distances between the positions is fixed and the user does not have to continually support the camera.

9. Applicant's arguments with respect to claims of record have been considered but are moot in view of the new ground(s) of rejection.

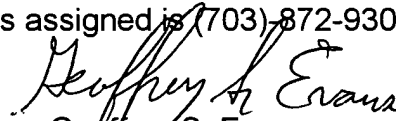
10. Claims 3,5,8,9,11, and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Origasa et al. in Japan Patent No. 5-111,782 discloses a laser drilling device with two cameras (34 and 34'; see paragraph 12). Myer in U.S. Patent No. 3,463,594 has a laser tool with a binocular head (element 42).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey S Evans whose telephone number is (571)-272-1174. The examiner can normally be reached on Mon-Fri 6:30AM to 4:00 PM, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571)-272-1171. The fax phone number for the organization where this application or proceeding is assigned is (703)-872-9306.

GSE


Geoffrey S. Evans
Primary Examiner
Group 1700